The Role of the Environmental Management System in The Integrated Management System Of Companies

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ABSTRACT

In this article, was characterized the environmental management system. The role of EMS in the integrated management system was shown. The scope of the EMS and the quality management system at the enterprise are clearly presented. Considered and substantiated are the advantages obtained by the enterprise in the implementation of the EMS along with the QMS.

Keywords: ISO 14001 standard, environmental management system, integration, quality management system.

Introduction

An integrated management system (IMS) is a management system of an organization aimed at manufacturing high-quality products (services) and based on the integration of functional and process management systems through the application of management system-oriented standards, subject to the requirements of environmental and social standards and legislation [1-4].

In the modern world, in a market economy, the management of enterprises (organizations) for the successful implementation of activities must take into accounts the requirements and wishes of all interested parties (partners, regulatory authorities, society, etc.), on the basis of which the main goals of the enterprise are formed [5-9]:

– to produce high-quality products sold in the markets;

– get the maximum possible profit;

– ensure employment and an appropriate level of remuneration;

– guarantee the quality of the environment.

Implementation of these goals at the enterprise contributes to the introduction of an integrated management system.

Thus, an integrated management system is a part of a general management system that meets the requirements of two or more standards and functions as a whole. As a rule, the IMS is based on the ISO 9000 and 14000 series standards (quality management system and environmental management system) [10-17].

Materials

The quality management system (QMS) is a part of the organization's management system that allows you to control and coordinate the processes of planning, ensuring and improving the quality of products or services in any organization. The main motive for the introduction of QMS is the desire to increase the efficiency of production operations, to improve product quality. An environmental management system (EMS) is a part of an organization's management system used to

develop and implement an environmental policy and manage its environmental aspects. The EMS is a modern approach to taking into account the priorities of environmental protection in the planning and implementation of the activities of organizations [18-23].

The ISO 9001 standard acts as a basic, system-forming element in the integrated management system. It is the implementation and functioning of the QMS that makes it possible to improve the quality of the products (services) of the enterprise by controlling processes at each stage of product creation. The consequence of quality improvement is an increase in the competitiveness of the enterprise [24-31].

However, the environmental management system, created on the basis of ISO 14000 series standards, also plays an important role in the IMS. The EMS allows you to control the negative impact of each stage of production activities on the environment, as well as plan the activities of the enterprise in such a way as to minimize these impacts. Without taking into account the environmental component at each stage of the production process, it is impossible to create competitive products [32-37].

The main indicator of competitiveness that determines the success of products in the world market is "environmental quality", that is, the degree of compliance of the product and the parameters of its production technology with the requirements that ensure the environmental safety of the environment, life and human needs.

Of course, both opinions are correct. However, the introduction of only one of the management systems (EMS or QMS) at the enterprise will not allow achieving the maximum level of competitiveness of products (services).

Most of the publications devoted to the problem of integrated management systems describe individual elements of the IMS formation methodology based on a mechanical comparison of the requirements of various standards for management systems, which imposes certain restrictions on their use. Among a number of works on this topic, the most complete and scientifically sound are PAS 99:2006 "Specification of common management system requirements as a framework for integration" and AS / NZS 4581:1999 "Integration of management systems - Guidelines for private, government and public organizations".

It should be noted that PAS 99:2006 contains unified requirements for the integration of management systems without disclosing them in the context of general approaches and principles for the formation of IMS. In turn, AS/NZS 4581:1999 provides guidance on the use of a number of elements and principles for the integration of management systems without considering them in terms of the practical application and use of quality management principles [37-41].

The integrated management system model is based on nine principles of IMS, which were formed on the basis of the principles of quality management set forth in the ISO 9000 series standards, the concept of total quality management (TQM) and taking into account the principles and models of integration of management systems, as well as risk management: balance the interests of the parties involved; leadership leadership; goal orientation; staff involvement; compliance with legal and other requirements; risk-based approach; process approach; a systematic approach to management; fact-based decision making; continuous improvement [42-47].

Quality management systems and environmental management systems have much in common (ISO 14000 standards are based on ISO 9000 standards). According to the estimates of consulting firms that implement QMS and EMS at enterprises, up to 70% of the information and management procedures in both systems are identical, which is clearly shown in the figure, analyzing which, we can conclude that for organizations (enterprises) that have successfully implemented QMS, SEM are unlikely to bring anything new to management approaches. However, this conclusion is not entirely correct, since the EMS considers the production (technological) process more clearly and in detail from the point of view of the negative impact on the environment, using the process approach.

Methods and discussions

The EMS, first of all, is focused on ensuring that all subsystems of the enterprise guarantee the protection of the environment from their negative impact through the management of the environmental component.

The introduction and operation of the EMS at the enterprise contributes to the consideration of environmental problems in conjunction with other types of activities: transport, procurement, production, financial, etc. With the introduction of the EMS, a very important principle of the economic efficiency of environmental protection is strengthened - the principle of pollution prevention.

The essence of this principle is as follows: it is possible to reduce the negative impact on the environment most effectively by influencing the processes that cause it - the root cause of the impact. This is especially important for Russian enterprises (organizations), where, from the point of view of managers, environmental protection measures have a lower priority than production tasks.

This approach was formed at the end of the 20th century, when methods of environmental protection "at the end of the pipe" became widespread in Russia (often expensive measures to clean up exhaust gases, wastewater, limit the ingress of pollutants into the environment, non-compliance with which caused inconsistency with environmental legislation). The introduction of an EMS allows you to change this opinion, and with it the management approaches and organization of production, allowing you to eliminate the causes of harmful effects.

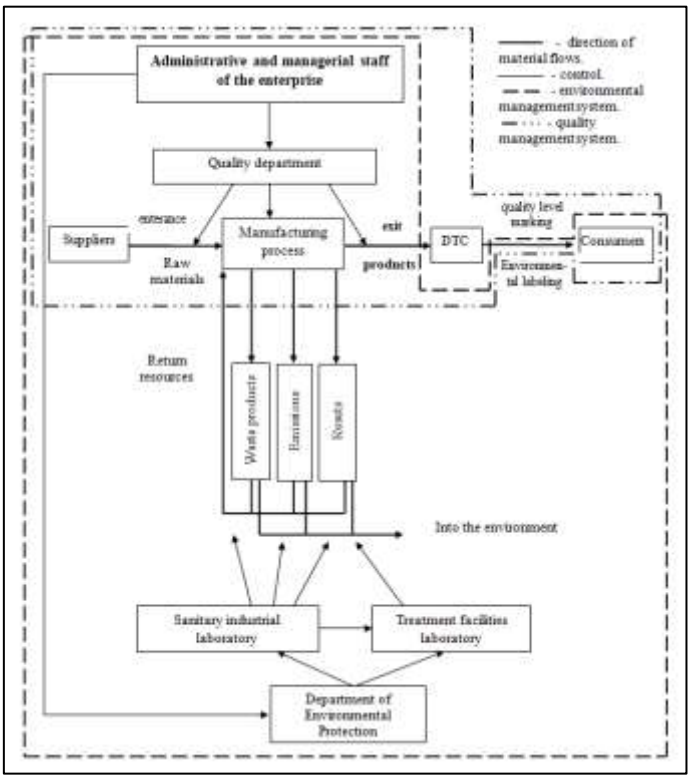

Fig. 1. Interaction of QMS and EMS at the enterprise.

The EMS plays the role of a structure in which the search and application of pollution prevention methods take on a regular and systematic character, that is, the EMS brings risk benefits to the enterprise - the likelihood of violating environmental legislation, imposing fines and other types of administrative and other liability is reduced; readiness to act in emergency situations causes a lower probability of their occurrence.

Organizational measures related to the control of the production process, the choice of raw materials, the recycling or processing of materials (waste), production logistics, etc.,

play a very important role in the EMS. It is these methods that are the main EMS tool to reduce environmental impact. Optimization of the use of raw materials and resources helps to reduce the cost of production and increase the availability of raw materials (such advantages of implementing an EMS are called resource benefits).

The environmental management system is built on the mechanism of tactical planning. Planning and continual improvement are a significant part of the requirements of ISO 14000. In enterprises that have implemented a QMS, tactical planning is often not given enough attention. The development of an EMS and the creation of an integrated management system at such enterprises helps to ensure practical, and not just formal, compliance of the QMS with the requirements of ISO 9000 (for example, by setting and achieving quality goals).

Thus, when introducing an EMS at an enterprise, the management of the enterprise is improved, its sustainability is increased (due to improved product quality; increasing the level of competitiveness; reducing costs associated with the impact of the enterprise on the environment; increasing investment) and mobility (due to increased production efficiency, recognition of products internationally and globally). Such advantages can be attributed to the systemic advantages of implementing an EMS.

The consequence of systemic advantages, manifested in increasing the stability and manageability of the enterprise, are market advantages associated with investment, lending and insurance. For a lender, investor, insurer, cooperation with a more reliable organization means less risk - less likelihood of insurance payments.

Also, a significant advantage of the introduction of EMS at enterprises is the reduction of payments for the negative impact on the environment. This advantage is especially relevant for enterprises of the Irkutsk region, the Republic of Buryatia, located in the Baikal nature conservation area, and enterprises of the Far North. Payments for the negative impact of these enterprises on the environment are twice as high as payments from enterprises in other regions.

The results of the implementation of the EMS and the environmental activities carried out within its framework are also manifested in an increase in the ability to work and a decrease in the incidence of diseases of workers and their families.

The introduction of EMS at enterprises (organizations) around the world leads to an increase in environmental culture and a more attentive attitude towards the environment both at work and in private life.

Conclusions

After analyzing all of the above, we can draw the following conclusions:

- the introduction of an EMS along with a QMS at an enterprise makes it possible to achieve the maximum level of competitiveness of this enterprise by taking into account the environmental component at each stage of creating a product (service), since with the introduction of an EMS at an enterprise, the "environmental quality" of products (services) increases;
- The EMS considers the production process in detail from the point of view of the negative impact on the environment, allowing the implementation of the principle of pollution prevention;
- EMS considers and implements options for solving production problems with a minimum negative impact on the environment, which helps to reduce payments for negative impact;
- the introduction of EMS and the formation of IMS at the enterprise has a positive effect on the health and environmental culture of its employees and the entire population of the area located near this enterprise.

Thus, the introduction of EMS at enterprises and the formation of IMS is currently of particular relevance, as it leads to an increase in management culture.

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